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PROVISIONAL INTELLIGENCE REPORT

PETROLEUM IN THE SOVIET BLOC

CIVIL CONSUMPTION OF PETROLEUM PRODUCTS IN THE USSR

CIA/RR PR-17 (I-F)

ANNEX

19 June 1952

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Note

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SOURCES

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1/ These data are derived as follows:

1928. Bol'shaya Sovetskaya entsiklopediya (The Large Soviet Encyclopedia)

Vol. I, 2nd. Ed., sent to press December 1949, p. 272, states that freight traffic of the USSR in 1940 was 89 times that in 1928.

1929. SID-USSR, Chapter VIII, "Transportation and Communications,"

Section 3, "Highway Transportation", Department of State, 8 January 1949 (Confidential).

Converted from billion short ton-miles. Original source not traced.

1932. L. Ya. Vol'fson, V. I. Ledovskoy, N. S. Shil'nikov, Ekonomika transporta

(Economics of Transport), Transzheldorizdat, Moscow, 1941, p. 209. 1932 traffic

is given more precisely as 1.07 billion ton-kilometers in the official text of

the Second Five Year Plan, Vtoroy pyatiletniy plan razvitiya narodnogo khozyaystva

SSSR (Second Five-Year Plan of Development of the National Economy of the USSR),

Gosplan SSSR, 1934 p. 269.

1933. Same source as 1929.

1937. Same source as 1932

1940. A. V. Gorinov and N. P. Divnogorakiy, Razvitiye tekhniki zheleznodorozhnogo

transporta, Gosplanizdat, 1948, p. 6. In Bol'shaya Sovetskaya entsiklopediya (Large

Soviet Encyclopedia) USSR volume, 1947, p. 951, this is given as 9 billion ton-kilo-

meters, which is evidently a rounding of the more precise figure.

1941 Plan. Gosudarstvennyy plan razvitiya narodnogo khozyaystva SSSR na 1941

god (State Plan of Development of the National Economy of the USSR for 1941)

(Appendix to Decree No. 127, 17 January 1941 of the Council of Ministers of the USSR

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and the Central Committee of the All-Union Communist Party). Secret. This is a clearly authentic classified document which was captured by the Germans during the war, and which later fell into the hands of the British and Americans. While the plan was never realized due to the outbreak of the war with Germany in June 1941, the figures contained in it should represent the Russians' best estimate of what could be achieved in 1941 in the light of preliminary 1940 results. It is, therefore, a good check on 1940 figures.

1945. O pyatiletnem plane vosstanovleniya narodnogo khozyaystva SSSR na 1946-1950 gg.

(The Five-Year Plan of Restoration and Development of the National Economy of the USSR for 1946-1950) (Materials for Lecturers and Propagandists), Izdatel'stvo vysshykh partiynykh shkolykh pri TsKVP (b), Moscow, no date, but probably 1947, p. 42 gives automobile freight traffic in 1945 as 1.2% of total auto, rail, river, and maritime freight traffic, and rail freight traffic as 86.4% of that total. According to A. V. Gorinov, Proyektirovaniye zheleznnykh dorog (Planning Railroads), Moscow, 1948, p. 30, (Library of Congress Treasure Island Project Extract), railroad freight traffic in that year was 314 billion ton-kilometers. Computing from these facts, automobile freight traffic in 1945 is derived to be 4.4 billion ton-kilometers.

1946. Moscow News, 22 January 1947, states that the total freight carried by motor transport in 1946 was 1.45 times the 1945 total.

1947. Computed back from 1950. See below. The increase indicated here over 1946 amounts to 4.4 billion ton-kilometers, or 69%. The USSR Information Bulletin, Soviet Embassy, Washington, D. C., 16 April 1947, shows that the planned increase was only 23%. It is difficult to arrive at a satisfactory explanation for this,

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since the derivation of the 1945 and 1946 figures appears to be sound, and since the Central Statistical Administration's report on the results of the Five-Year Plan, 1946-1950, omits a reference to the increase in 1947 traffic over 1946. It is believed that this jump may have resulted from wider reporting of traffic in 1947 as compared to the previous years. Another possible explanation is that a substantial volume of military trucking may have been returned to the civilian economy in 1947, resulting in a considerable expansion of civilian trucking. The former explanation is believed to be the more probable.

1948. Computed back from 1950 data. See below.

1949. Ditto.

1950 (Plan). Bol'shaya Sovetskaya entsiklopediya (Large Soviet Encyclopedia),

USSR Volume, 1947, p. 951.

1950. (Actual) 1950 traffic was reported as 2.3 times 1940 traffic in the Central Statistical Administration's report of 16 April 1951 on the fulfillment of the Five-Year Plan for 1946-1950. This appeared in the Soviet press on 27 April 1951, and a translation appears in the USSR Information Bulletin, Soviet Embassy, Washington, D. C., 1 May 1951. The Russian radio announced on 26 January 1951 that 1950 traffic was 18 percent greater than 1949; on 17 January 1950 that 1949 traffic increased 28 percent over 1948; and on 20 January 1949 that 1948 traffic was 23% over 1947, and almost 1.5 times 1940 traffic. 25X1

The 1948 over 1947 increase also appears in the USSR Information Bulletin, Soviet Embassy, Washington, D. C., 11 February 1949, p. 70, and in Bol'shaya sovetskaya entsiklopediya, Vol. I., 2nd. Ed., p. 273.

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Calculation of 1950 traffic as being 2.3 times the 1940 figure of 8.9 billion ton-kilometers gives 20.5 billion ton-kilometers of traffic for 1950. Calculating the 1948 figure back from this figure of 20.5 gives a figure of 13.6 billion ton-kilometers in 1948. But it is known in addition that 1948 traffic was not as much as 13.4 billion ton-kilometers, since 1948 traffic was almost 1.5 times 1940 traffic. If it is alternatively assumed that 1948 traffic was 13.3 billion ton-kilometers, then 1950 traffic can be calculated to be 20.1 billion ton-kilometers. This figure still answers the conditions of being 2.3 times the 1940 figure of 8.9, since it is, more precisely, 2.26 times the 1940 figure.

1951 (Estimated). Derived by assuming that the 18 percent increase registered in 1950 traffic over 1949 traffic will represent the rate of growth of traffic between 1950 and 1951.

1952 (Estimated). Derived by applying the 18 percent increase determined above to the 1951 estimate.

1953, Fiscal (Estimated). Derived by calculating 1953 traffic on the basis of an 18% increase over 1952, and then adding half of this figure to half of the 1952 traffic estimate.

2/ Planovoye khozyaystvo, No. 2, 1937

3/ Planovoye khozyaystvo, No. 5, 1938

4/ Ya. Ioffe, SSSR i kapitalisticheskiye strany, Gosplanizdat, Moscow, 1939,

p. 312.

5/ Mid-year inventories are calculated by taking the end-of-year inventory

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for the previous year, and adding to it half the increase registered during the year.

Thus, 1936 inventory equals  $201.2 \text{ plus } \frac{315.5 - 201.2}{2}$ , or 253.4

1937 inventory equals  $315.5 \text{ plus } \frac{474.5 - 315.5}{2}$ , or 395.0

6/ The maximum possible statistical error in an upward direction is of interest to those who may wish to make a detailed analysis of the methodology of this report. A preliminary effort has been made to calculate the compound error which may be possible. The error factors in an upward direction which have been taken into account may be found in the text, under (2) "Errors in Statistics used in the Calculations," paragraphs (b), (c) and (d). Very generally, the maximum compound distortion possible, from these errors should be expressible as:

$$\frac{110\% \times 110\%}{84\%}, \text{ or } 1.44$$

It must be pointed out again that this calculation only takes into account the errors which would tend to make the estimates too low. It would appear that the maximum upward error statistically possible with this method is about 44%.

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8/ Sotsialisticheskoe Seiskoe Khozyaystvo, 1947, No. 8, p. 11.

9/ OIR Report No. 4704, July 21, 1949, Draft Power in Soviet Agriculture.

Department of State. Restricted.

10/ Voennaya Ekonomika SSSR v Period Otechestvennoy Voiny, by N. Voznesenskiy, Moscow, 1947, p. 160.

11/ See Twenty-First Report to Congress on Lend-Lease Operations, for the Period Ended September 30, 1945 and also United States Exports of Domestic and Foreign

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Merchandise, Report No. FT 410, Section H. Group 7, 1946 and 1947, Bureau of the Census, Department of Commerce.

12/ OIR Report No. 4704, IBID. Restricted.

13/ 1950 Production 82,000 units according to Bulganin's Speech, November 7, 1950. 1951 production 62,000 units per Beriya's Speech, November 7, 1951. 1949 and 1952 production are CIA estimates.

14/ Sotsialisticheskoye Zemelodeliye June 10, 1951, and Izvestia May 13, 1951.

15/ R & A No. 2516, Domestic Consumption of Petroleum Products in the USSR, 1945-52, Confidential, which cites Wassiliouf, Soviet Oil Industry in 1938, in 1939 and in the First Six Months of 1940: COI (OSS) Report No. 58, The Effect of Territorial Losses on Russia's Petroleum Position, 20 May 1942, pp. 27-29.

Restricted.

16/ See "O Tipakh Traktorov v Selskom Khozyaystve SSSR", by S. P. Matskevitch, in Sotsialisticheskoye Selskoye Khozyaystvo, No. 12, December 1943.

17/ R & A No. 2516, ibid. Confidential.

Khozyaystvo

18/ R & A No. 2516, ibid. Confidential.

19/

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21/ R & A No. 2516, ibid. Confidential.

22/ Data from Technical Division U. S. Maritime Commission.

23/ Data from Record of American Bureau of Shipping (1944), and Merchant Vessels of the United States (1941).

24/ Data from Merchant Vessels of the United States (1941).

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25/ 9th Edition, Questions and Answers for Marine Engineers, Marine Engineering and Shipping Review, New York, 1950.

26/ Data from Record of American Bureau of Shipping, 1949.

27/ 9th Edition, et al. Ibid.

28/ NIS 26. Top Secret.

29/ Strategic Intelligence Digest, USSR, Chapter VIII, "Transportation and Communication," Section 5, pp. 3-6. Confidential.

30/ River Transport, 31 October 1947.

31/ SID, op. cit., pp. 3-6. Confidential.

32/ Calculated from data in USSR Information Bulletin, 1 May 1951, together with data from SID, op. cit., pp. 3-7. Confidential.

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34/ SID, op. cit., pp. 3, 6, 7. Confidential.

35/ N. N. Baranskiy, Economic Geography of the USSR, 8th ed., Moscow, 1947, p. 63.

36/ An Inquiry into the Economics of Railroad Transportation, Moscow, 1948.

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38/ ORR, D/EE estimate.

39/ I.C.C., Statistics of Railways in the US, 1947.

40/ ORR, S/Tr estimate.

41/ Gudok, 11 February 1951.

42/ ORR, S/Tr data.

43/ ORR, S/Tr data.

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44/ Embassy Moscow Cable, 31 July 1944, Handbook on USSR Railroads.

45/ Ditto.

46/ I. G. Murzin, Tekhnologiya topliva, vedy i smazki, Moscow, 1949, p. 4.

47/ Sotsialisticheskoye Stroitel'stvo SSSR, 1935. Tables 19 & 20.

48/ SYD, USSR, Vol. II. Confidential.

49/ See Table 26.

50/ Sotsialisticheskoye Stroitel'stvo SSSR, 1935, Ibid.

51/ A. M. Babichkov, V. P. Yegorchenko, Tyaga Poyezdov, State Transport

Railroad Publishing House, Moscow, 1947, pp. 331-336.

52/ B. Levin, FDD Translation 29/49.

53/ US Element, Allied Commission for Austria, Report of the US High Commissioner,

Statistical Summary First Quarter 1951, No. 53. According to this source, 1950

consumption by locomotives of lubes and greases was 21 kilograms per 1000 locomotive

kilometers.

54/ S/Tr data relating to lubricant consumption by the Great Northern Railroad

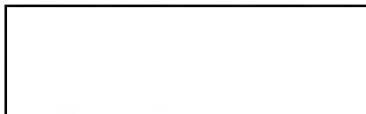
in 1939.

55/ Planovoye Khozyaystvo, 1937, No. 2, p. 34.

56/ Planovoye Khozyaystvo, Ibid.

57/ COI (OSS) Report 58, 20 May 1942. Restricted.

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59/

60/ ONI (OP-322FIC4), 29 February 1952, from B. U. S. Davis

Reports Division, CIA, Secret.

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61/ ORE 24-49, 5 January 1960, Tables X and XIV, pp. 20, 25. Top Secret.

62/ COI (OSS) Report 58, Ibid. Restricted.

63/ Data for 1932 and 1936 (Actual) are taken from Plannovoye Khozyaystvo No. 1,

1938, The Distribution of the Motor Fuel Industry in the USSR. The 1931 figure of

825.6 million metric tons is taken from the same source.

The 1941 Plan figure is derived by taking two pieces of data from the unpublished 1941 Plan captured by the Germans. From total kerosene of all types scheduled to be produced (7,118,950 metric tons) is subtracted the total kerosene to be produced for tractors (5,180,000 metric tons), indicating 1,938,950 metric tons of non-tractor kerosene planned for production in 1941. It has been assumed that all of this non-tractor kerosene was planned for home and industrial use. While there may have been small increments of kerosene for other uses, it is not believed that these were significant.

The other data in the table were derived from statistics included in V. V. Povorozhenko, The Organization of Hauling Liquid Freight by Railroad Transport, Transzheldorizdat, Moscow, 1941, p. 22. In this source, total USSR Consumption of kerosene is given for the years shown below and tractor consumption for the same years is also given. The difference between the two is considered to be the consumption of kerosene by industrial and home groups.

Statistics Relating to Kerosene Consumption

Year	1913-1936		Thousand Metric Tons	
	Total USSR Kerosene Consumption	Tractor Consumption	Difference	
1913	800	-	800	
1925/26	860	82	778	
1929/30	2,180	660	1,520	
1933	3,234	1,294	1,940	
1936	4,048	3,000	1,048	
1936 (Plan)	4,800	3,500	1,300	

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64/ Planovuye Khozyaystvo, No. 2, 1937.

65/ Ibid.

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66/ Document No. 2-21689, HQ# US Air Force. CIA Control Number 028221.

20 November 1951. Top Secret.

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